

# Medicinal and Botanical Manufacturing: 2002

Issued December 2004

EC02-311-325411 (RV)

## 2002 Economic Census

*Manufacturing*

Industry Series



USCENSUSBUREAU

*Helping You Make Informed Decisions*

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU



## CONTENTS

Introduction to the Economic Census .....	v
Manufacturing .....	ix

### Tables

1. Historical Statistics for the Industry: 2002 and Earlier Years ...	1
2. Industry Statistics for Selected States: 2002 .....	2
3. Detailed Statistics by Industry: 2002 .....	3
4. Industry Statistics by Employment Size: 2002.....	4
5. Industry Statistics by Primary Product Class Specialization: 2002 .....	5
6a. Products Statistics: 2002 and 1997 .....	6
6b. Product Class Shipments for Selected States: 2002 and 1997 .	7
7. Materials Consumed by Kind: 2002 and 1997.....	8

### Appendixes

A. Explanation of Terms .....	A-1
B. NAICS Codes, Titles, and Descriptions .....	B-1
C. Methodology .....	C-1
D. Geographic Notes .....	--
E. Metropolitan and Micropolitan Statistical Areas .....	--
F. Comparability of Product Classes and Product Codes: 2002 to 1997 .....	F-1

-- Not applicable for this report.

**Table 1. Historical Statistics for the Industry: 2002 and Earlier Years**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year <sup>1</sup>	Com- panies <sup>2</sup>	All estab- lish- ments <sup>3</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
			Number <sup>4</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
325411, Medicinal and botanical manufacturing .....	2002..	342	19 938	1 057 138	10 572	23 712	476 535	7 340 277	4 254 056	11 585 499	'869 089
	2001..	N	19 104	994 002	9 982	21 586	450 327	7 294 214	4 174 167	11 405 452	937 943
	2000..	N	18 916	977 636	9 951	20 652	445 956	7 470 532	4 666 561	12 152 574	1 012 193
	1999..	N	21 351	1 146 762	11 009	23 122	501 890	5 838 645	6 342 072	11 762 349	877 957
	1998..	N	30 023	1 728 518	14 549	32 856	679 524	7 208 430	5 936 351	13 169 467	1 021 414
	1997..	312	27 764	1 530 029	13 505	29 216	596 030	6 297 660	5 588 337	11 888 455	1 125 300

<sup>1</sup>Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

<sup>2</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during the year.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 2. Industry Statistics for Selected States: 2002**

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
<b>325411, Medicinal and botanical manufacturing</b>												
United States .....	—	367	130	19 938	1 057 138	10 572	23 712	476 535	7 340 277	4 254 056	11 585 499	'869 089
California .....	1	64	18	2 581	127 802	1 367	3 554	42 808	443 934	248 892	693 674	'66 372
Colorado .....	—	10	4	613	40 592	337	704	20 065	82 367	55 644	145 596	'20 118
Florida .....	—	14	2	215	10 818	55	64	1 476	110 475	211 587	297 660	'5 780
Illinois .....	—	15	7	733	36 499	387	857	16 833	262 645	292 970	569 730	'14 751
Iowa .....	1	8	3	267	13 681	133	285	6 436	84 523	61 717	145 116	'10 972
Massachusetts .....	3	16	6	492	28 296	253	507	12 653	64 191	31 038	94 195	'6 312
Michigan .....	—	6	4	617	37 044	264	999	12 847	168 895	107 129	231 820	'17 023
Minnesota .....	3	9	3	287	15 571	85	165	3 366	108 886	29 982	129 341	'1 866
New Jersey .....	—	37	20	4 869	234 488	2 308	4 433	109 945	1 641 387	751 662	2 437 708	'257 171
New York .....	1	28	9	861	35 214	582	1 389	16 694	115 153	119 950	235 579	'12 451
Texas .....	—	17	4	1 449	68 398	1 276	2 908	58 640	145 800	97 834	245 522	'13 858
Wisconsin .....	3	7	4	231	10 672	164	280	6 316	31 899	15 173	45 335	'17 056

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 3. Detailed Statistics by Industry: 2002**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>325411, Medicinal and botanical manufacturing</b>	
Companies <sup>1</sup> .....	number.. 342
All establishments <sup>2</sup> .....	number.. 367
Establishments with 1 to 19 employees .....	number.. 237
Establishments with 20 to 99 employees .....	number.. 87
Establishments with 100 employees or more .....	number.. 43
All employees <sup>3</sup> .....	number.. 19 938
Total compensation .....	\$1,000.. 1 288 741
Annual payroll .....	\$1,000.. 1 057 138
Total fringe benefits .....	\$1,000.. 231 603
Production workers, average for year .....	number.. 10 572
Production workers on March 12 .....	number.. 10 513
Production workers on May 12 .....	number.. 10 588
Production workers on August 12 .....	number.. 10 583
Production workers on November 12 .....	number.. 10 586
Production worker hours .....	1,000.. 23 712
Production worker wages .....	\$1,000.. 476 535
Total cost of materials .....	\$1,000.. 4 254 056
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 3 929 302
Resales .....	\$1,000.. 131 154
Purchased fuels .....	\$1,000.. 72 694
Purchased electricity .....	\$1,000.. 77 056
Contract work .....	\$1,000.. 43 850
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 1 345 419
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. D
Total value of shipments .....	\$1,000.. 11 585 499
Primary products value of shipments .....	\$1,000.. 10 968 621
Secondary products value of shipments .....	\$1,000.. 414 252
Total miscellaneous receipts .....	\$1,000.. 202 626
Value of resales .....	\$1,000.. 188 689
Contract receipts .....	\$1,000.. 4 086
Other miscellaneous receipts .....	\$1,000.. 9 851
Primary products specialization ratio .....	percent.. 96
Value of primary products shipments made in all industries .....	\$1,000.. 13 573 805
Value of primary products shipments made in this industry .....	\$1,000.. 10 968 621
Value of primary products shipments made in other industries .....	\$1,000.. 2 605 184
Coverage ratio .....	percent.. 81
Value added .....	\$1,000.. 7 340 277
Total inventories, beginning of year .....	\$1,000.. 1 588 011
Finished goods inventories .....	\$1,000.. 669 459
Work-in-process inventories .....	\$1,000.. 497 613
Materials and supplies inventories .....	\$1,000.. 420 939
Total inventories, end of year .....	\$1,000.. 1 614 992
Finished goods inventories .....	\$1,000.. 665 757
Work-in-process inventories .....	\$1,000.. 510 149
Materials and supplies inventories .....	\$1,000.. 439 086
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. '6 817 456
Total capital expenditures (new and used) .....	\$1,000.. '869 089
Buildings and other structures (new and used) .....	\$1,000.. '244 050
Machinery and equipment (new and used) .....	\$1,000.. '625 039
Automobiles, trucks, etc., for highway use .....	\$1,000.. '3 759
Computers and peripheral data processing equipment .....	\$1,000.. '31 858
All other expenditures for machinery and equipment .....	\$1,000.. '589 422
Total retirements .....	\$1,000.. '261 155
Gross value of depreciable assets at end of year .....	\$1,000.. '7 425 390
Depreciation charges during year .....	\$1,000.. '451 688
Total rental payments .....	\$1,000.. 52 679
Buildings and other structures .....	\$1,000.. 34 630
Machinery and equipment .....	\$1,000.. 18 049
Total other expenses <sup>4</sup> .....	\$1,000.. 371 308
Response coverage ratio <sup>5</sup> .....	percent.. 95
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. 86 633
Communications services <sup>4</sup> .....	\$1,000.. 7 847
Legal services <sup>4</sup> .....	\$1,000.. 4 204
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. 1 346
Advertising and promotional services <sup>4</sup> .....	\$1,000.. 10 290
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. 5 328
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. 28 991
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. 17 427
Taxes and license fees <sup>4</sup> .....	\$1,000.. 25 680
All other expenses <sup>4</sup> .....	\$1,000.. 183 563

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Based on Annual Survey of Manufactures (ASM) sample data.

<sup>5</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 4. Industry Statistics by Employment Size: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E <sup>1</sup>	All establishments <sup>2</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
325411, Medicinal and botanical manufacturing											
All establishments .....	—	367	19 938	1 057 138	10 572	23 712	476 535	7 340 277	4 254 056	11 585 499	'869 089
Establishments with—											
1 to 4 employees .....	9	152	317	16 450	178	333	6 808	56 231	37 603	93 895	'5 342
5 to 9 employees .....	7	48	318	19 330	157	318	7 565	69 143	48 311	117 954	'5 697
10 to 19 employees .....	4	37	f	D	D	D	D	D	D	D	'7 939
20 to 49 employees .....	2	51	1 821	96 196	889	2 519	37 349	409 874	348 408	744 342	D
50 to 99 employees .....	—	36	2 525	107 563	1 541	4 284	49 051	468 445	476 015	927 813	'32 645
100 to 249 employees .....	—	27	4 467	222 614	2 384	6 124	93 922	620 391	527 531	1 133 086	'145 966
250 to 499 employees .....	—	7	2 103	119 650	1 104	2 345	49 787	596 266	447 947	1 018 554	'56 098
500 to 999 employees .....	—	6	3 837	212 843	1 822	2 845	81 294	2 494 621	893 312	3 425 539	223 115
1,000 to 2,499 employees .....	—	3	h	D	D	D	D	D	D	D	D
2,500 employees or more .....	—	—	—	—	—	—	—	—	—	—	—
Administrative records <sup>4</sup> .....	9	180	646	37 636	352	691	15 612	126 910	86 405	212 761	'11 834

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 5. Industry Statistics by Primary Product Class Specialization: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments <sup>1</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>2</sup>	Payroll (\$1,000)	Number <sup>2</sup>	Hours (1,000)	Wages (\$1,000)				
325411	Medicinal and botanical manufacturing .....	367	19 938	1 057 138	10 572	23 712	476 535	7 340 277	4 254 056	11 585 499	'869 089
3254111	Synthetic organic medicinal chemicals, in bulk .....	103	11 316	683 269	5 260	12 901	289 042	5 909 004	3 127 765	9 016 791	'737 668
3254114	Medicinals and botanicals, all other medicinal chemicals and botanical products, in bulk .....	72	7 931	335 382	4 934	10 056	171 391	1 293 939	1 033 121	2 338 277	'116 358

<sup>1</sup>Includes establishments with payroll at any time during the year.

<sup>2</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6a. Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
325411	Medicinal and botanical manufacturing .....	2002.. N	X	X	13 573 805
	1997.. N		X	X	10 985 383
3254111	Synthetic organic medicinal chemicals, in bulk .....	2002.. N	X	X	10 198 968
	1997.. N		X	X	8 249 161
32541111	Synthetic organic antibiotics, including all uses (veterinary, food supplements, food preservation, etc.), excluding preparations .....	2002.. N	X	X	7 697 065
	1997.. N		X	X	D
325411111	Synthetic organic antibiotics, including all uses (veterinary, food supplements, food preservation, etc.), excluding preparations .....	2002.. 56	X	X	7 697 065
	1997.. 21		X	X	D
32541112	Other synthetic organic medicinal chemicals, excluding antibiotics .....	2002.. N	X	X	2 500 794
	1997.. N		X	X	D
3254111221	Other synthetic organic medicinal chemicals, excluding antibiotics .....	2002.. 72	X	X	2 500 794
	1997.. 159		X	X	D
3254111Y	Synthetic organic medicinal chemicals, in bulk, nsk .....	2002.. N	X	X	1 109
	1997.. N		X	X	67 133
3254111YVV	Synthetic organic medicinal chemicals, in bulk, nsk .....	2002.. N	X	X	1 109
	1997.. N		X	X	67 133
3254114	Medicinals and botanicals, all other medicinal chemicals and botanical products, in bulk .....	2002.. N	X	X	3 167 483
	1997.. N		X	X	2 625 474
32541141	Botanical drugs, alkaloids drugs, other botanical drugs, naturally occurring vitamins, drugs of animal origin, and artificial mixtures of two or more medical or botanical substances .....	2002.. N	X	X	2 831 566
	1997.. N		X	X	1 880 581
3254114111	Botanical drugs, alkaloids, including opium and nicotine .....	2002.. 12	X	X	835 284
	1997.. 7		X	X	111 513
3254114121	Other botanical drugs, including glycosides and ginseng extract .....	2002.. 22	X	X	392 753
	1997.. 21		X	X	292 608
3254114131	Naturally occurring vitamin C .....	2002.. 20	X	X	340 570
	1997.. 24		X	X	107 787
3254114141	Naturally occurring vitamin E .....	2002.. 22	X	X	435 445
	1997.. 25		X	X	481 795
3254114151	Medicinals and botanicals, all other medicinal and botanical products, in bulk, naturally occurring vitamins, other naturally occurring vitamins (from yeast, fish, liver, etc.) .....	2002.. 32	X	X	349 795
	1997.. 28		X	X	208 919
3254114161	Medicinals and botanicals, all other medicinal and botanical products, in bulk, drugs of animal origin, including hormones, dried glands, organs, and tissues and extractions thereof .....	2002.. 15	X	X	199 796
	1997.. 11		X	X	116 693
3254114171	Medicinals and botanicals, all other medicinal and botanical products, in bulk, artificial mixtures of two medicinal or botanical substances or more for therapeutic or prophylactic uses .....	2002.. 14	X	X	277 923
	1997.. 13		X	X	561 266
32541142	Medicinals and botanicals, all other medicinal and botanical products, in bulk, other organic and inorganic medicinal chemicals, excluding diagnostics .....	2002.. N	X	X	330 683
	1997.. N		X	X	698 057
3254114291	Medicinals and botanicals, all other medicinal and botanical products, in bulk, other organic and inorganic medicinal chemicals, excluding diagnostics .....	2002.. 26	X	X	330 683
	1997.. 41		X	X	698 057
3254114Y	Medicinals and botanicals, all other medicinal chemicals and botanical products, in bulk, nsk .....	2002.. N	X	X	5 234
	1997.. N		X	X	46 836
3254114YVV	Medicinals and botanicals, all other medicinal chemicals and botanical products, in bulk, nsk .....	2002.. N	X	X	5 234
	1997.. N		X	X	46 836
325411W	Medicinal and botanical manufacturing, nsk, total .....	2002.. N	X	X	207 354
	1997.. N		X	X	110 748
325411WY	Medicinal and botanical manufacturing, nsk, total .....	2002.. N	X	X	207 354
	1997.. N		X	X	110 748
325411WYWW	Medicinal and botanical manufacturing, nsk, for nonadministrative-record establishments .....	2002.. N	X	X	35 475
	1997.. N		X	X	86 312
325411WYWY	Medicinal and botanical manufacturing, nsk, for administrative-record establishments .....	2002.. N	X	X	171 879
	1997.. N		X	X	24 436

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.



**Table 6b. Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3254111	Synthetic organic medicinal chemicals, in bulk	
	United States .....	2002 .. 10 198 968
		1997 .. 8 249 161
	California .....	2002 .. 419 288
		1997 .. 163 990
	Illinois .....	2002 .. 250 232
		1997 .. N
	Massachusetts .....	2002 .. 47 073
		1997 .. 26 509
	Michigan .....	2002 .. 226 007
		1997 .. 125 280
	Minnesota .....	2002 .. 64 121
		1997 .. 20 525
	New Jersey .....	2002 .. 2 948 998
		1997 .. 1 400 297
3254114	Medicinals and botanicals, all other medicinal chemicals and botanical products, in bulk	
	United States .....	2002 .. 3 167 483
		1997 .. 2 625 474
	California .....	2002 .. 306 292
		1997 .. 382 044
	Florida .....	2002 .. 45 978
		1997 .. N
	Illinois .....	2002 .. 173 542
		1997 .. 313 394
	Iowa .....	2002 .. 63 889
		1997 .. N
	Massachusetts .....	2002 .. 34 547
		1997 .. N
	New Jersey .....	2002 .. 295 486
		1997 .. 89 172
	New York .....	2002 .. 899 304
		1997 .. 137 045

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 7. Materials Consumed by Kind: 2002 and 1997**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
325411	Medicinal and botanical manufacturing		
00900001	Total materials .....2002..	X	3 929 302
	.....1997..	X	4 997 852
32541113	Antibiotics (bulk), for human and veterinary use .....2002..	X	D
	.....1997..	X	D
32541115	Antibiotics (bulk), for animal feeds .....2002..	X	D
	.....1997..	X	D
32541101	Vitamins, natural and synthetic, for human and veterinary use (bulk) .....2002..	X	438 389
	.....1997..	X	224 062
32541103	Vitamins, natural and synthetic, for animal feeds (bulk) .....2002..	X	122 053
	.....1997..	X	36 615
11100033	Agricultural products, crude (including flowers, grains, seeds, herbs, etc.) .....2002..	X	31 945
	.....1997..	X	209 274
31100001	Processed food and kindred products (including lactose, meat packing plant products, yeast, etc.) .....2002..	X	5 970
	.....1997..	X	16 293
32541000	Blood derivatives and extenders .....2002..	X	D
	.....1997..	X	D
32541107	All other bulk medicinal and botanical uncompounded drugs (excluding antibiotics and vitamins) .....2002..	X	517 893
	.....1997..	X	386 955
32599807	Gelatin (pharmaceutical grade) and gelatin capsules .....2002..	X	10 450
	.....1997..	X	16 523
32519201	Cyclic crudes and intermediates (including organic colors) .....2002..	X	D
	.....1997..	X	D
32510031	Other synthetic organic chemicals (including halogenated hydrocarbons) .....2002..	X	235 990
	.....1997..	X	157 290
32610015	Fabricated plastics products, including plastics closures, film, and packaging items (excluding containers) .....2002..	X	4 887
	.....1997..	X	48 989
33211500	Metal closures and crowns for containers .....2002..	X	D
	.....1997..	X	D
32310003	Labels, coupons, instructions, and other printed material .....2002..	X	5 399
	.....1997..	X	14 315
32610029	Plastics containers .....2002..	X	28 376
	.....1997..	X	19 149
32721301	Glass containers .....2002..	X	1 510
	.....1997..	X	4 047
33240000	Metal containers .....2002..	X	1 654
	.....1997..	X	2 382
32221001	Paperboard containers, boxes, and corrugated paperboard .....2002..	X	21 499
	.....1997..	X	30 157
00970099	All other materials and components, parts, containers, and supplies .....2002..	X	258 932
	.....1997..	X	N
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	80 636
	.....1997..	X	488 646

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.